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ABSTRACT

Subjects preinformed or not preinformed of reinforcement contingencies interacted with high- or low-esteemed experimenters in a Taffel verbal conditioning situation. Tedeschi's SEV theory of social influence correctly predicted that non-preinformed subjects should emit more critical responses to the more esteemed than to the less esteemed experimenter, but a prediction based on previous research that preinformation should linearly heighten the effects of experimenter esteem was not supported; preinformation reversed the effects of esteem variables. These unexpected results are discussed in terms of role-taking and norm-elicitation hypotheses. The importance of the verbal reinforcement paradigm for studies of tacit influence is cited. A 19-item bibliography, footnotes, tables, and figures are included. (Author)

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SOCIAL INFLUENCE AND VERBAL REINFORCEMENT

Report to the Department of

Health, Education, and Welfare

Grant Number OEG-2-71-0073

James T. Tedeschi

Principal Investigator

1 September 1971

SP005654

Research was proposed to study the predictive power of a social influence theory in a study of target compliance to verbal operant conditioning by sources with differing characteristics. The language of decision theory was utilized by the social influence theory and was applied to the four basic types of influence: threats, promises, warnings, and mendations. Social reinforcement experiments were reinterpreted in terms of tacit promises. Under this conceptualization, the influence message has an expected value and source characteristics are said to bias the target's estimations of the probability components of those expected values. The current research was designed as a test of the theory.

It was argued that the reinterpretation of the verbal reinforcement situation would have practical implications for teacher-student relationships because in these situations conflict is often present and verbal reinforcers are intentionally employed as a means of shaping desired responses. Specifically, the esteem of a mediator of benefits was manipulated to test source characteristic effects upon critical responses of target subjects.

Attached is a preprint of the written report.

Esteem and the effectiveness of a verbal reinforcer[1,2]

Bob Helm, Robert Brown, and James T. Tedeschi

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Tedeschi, Bonoma, and Schlenker (1972) have proposed a general theory of social influence within dyads which interprets four basic types of influence communications in terms of decision theory. These influence communications include threats, promises, warnings, and mendations.[3] When a source utilizes one of these types of influence messages, he specifies a contingency between the target's responses and subsequent negative or positive outcomes. When threats and promises are used, the source controls the outcomes; however, the use of warnings and mendations implies that the source does not (even indirectly) control the outcomes. A probability and a value are associated with each message type. For example, a threat specifies a source demand and indicates the source's intention to punish the target for noncompliance. Similarly, a promise presents a source's request and offers a reward for compliance. The proportion of times the source has actually punished noncompliance to his threats or has rewarded compliance to his promises in previous interactions with the target defines the probability component of current threats or promises. The actual magnitude of punishment or reward stipulated in the current message defines the value associated with the influence attempt. The relationship between these two components is assumed to be multiplicative, yielding the expected value (EV) of a threat or a promise. All else equal, target compliance to promises is assumed to be a direct function of expected value, whereas compliance to threats is directly mediated by the expected costs of noncompliance.

The theory briefly outlined above also postulates that source characteristics of status, esteem, prestige, and attraction cause the target to bias

estimates of probabilities associated with the various message types. These biasing factors lead to subjective expected value (SEV) considerations, since they cause the the target individual to behave in a manner which cannot be predicted by expected value considerations alone. In a sense, "irrational" conduct is specified and predicted by Tedeschi's SEV theory of social influence.

An explicit influence attempt depends upon the use of linguistic symbols to state clearly the behaviors desired by the source, to describe the causal texture of the environment, or to describe the consequences for the target of doing or not doing as recommended, requested, or demanded. Tacit communications may be either verbal or nonverbal, and may be attached to the source's behaviors or to a situation contrived by the source--in any case, the nature of the contingency involved in the source's influence attempts is not made explicit. If a target must attempt to discover the nature of the contingency connecting his own behaviors to the reinforcements administered by the source, the influence message may be described as a tacit threat or a tacit promise.

The verbal conditioning literature can be redefined in terms of tacit promises (cf. Tedeschi, et al., 1972). The repetition of a reinforcement directly following the same reiterated response provides a basis for a recipient to abstract the "rule" governing the causal texture of his relationship to the experimenter. Dulaney (1962) has contended that the typical verbal reinforcement experiment can be interpreted as a problem-solving situation in which the cues to the problem solution are provided by the experimenter. As the subject approaches the problem, he finds that the experimenter sometimes emits a response, such as "good." The problem orientation leads the subject to search for a contingency hypothesis connecting the experimenter's verbal cues to his own behaviors. By emitting the words "good," "fine,"

"excellent," or "hmm-hmm," the experimenter socially rewards the "correct" verbal responses of the subject. From the subject's point of view, then, the experimenter tacitly communicates that he will reward a certain (compliant) response by the subject. Generally, the experimenter establishes 100% probability of reward for compliance to his tacit promises.

Vogel-Sprott (1969) and Vogel-Sprott and Burrows (1969) have conducted a series of experiments on human subjects in which shock was or was not made contingent upon performance of a previously rewarded response. Furthermore, the contingent shocks were administered under different schedules. She found that subjects were able to "abstract the rule" and respond in a manner to avoid the shock only when the punishment was both contingent and highly consistent (invariable). In other words, the "demand" associated with Vogel-Sprott's tacit threats was communicated to subjects only when the punishments (i.e., cues) were clearly and consistently associated with the forbidden behavior. These observations imply that the behaviors of the experimenter resemble language and suggest that a "grammar of behavior" could be developed. Apparently, unless the grammar of tacit communications follows more stringent rules than that of explicit communications, the target is unable to decode the intended message.

Page (1970) has connected the verbal reinforcement paradigm to problems of social perception and social influence. The subject has three discriminable tasks; he must discover the contingency, find out what the experimenter wants him to do (i.e., decode the request), and decide whether to comply or noncomply. Page's insight has led him into the controversy currently raging with regard to whether the individual must be fully aware of the contingency rule for significant conditioning to occur to verbal reinforcers.[4] However, the outcome

of the awareness controversy, if there ever is one, is not crucial for a subjective expected value theory of social influence since no assumptions about awareness, consciousness, or any observable consequent of phenomenological experiences are made. Confirmation of the theoretical predictions based on the assumption that target individuals make expected value calculations and behave accordingly is sufficient to establish the "reality" of such calucla-tions; the scientific respectability of the expected value concept does not depend upon the ability of subjects to verbalize the theory.

The SEV theory suggests that once tacit promises are decoded, the probability and value of reinforcements will determine whether and to what extent compliance will occur. Matthews and Dixon (1968), after scaling male and female voices according to preferability, used tape recordings to reinforce subjects in a conditioning task. Their results, consistent with SEV theory, showed that preferred voices were more effective in conditioning subjects. Similarly, Hemphill (1961) found that the greater the value of the reinforcement for opinion statements, the more frequently the subject attempted leadership behaviors. Litting and Waddel (1967), employing a serial learning task, exposed subjects to either positive ("You're doing fine"), neutral (silence), or negative ("You're very slow") reinforcing statements from the experimenter during inter-trial intervals. Social reinforcements were more effective in the positive and neutral conditions, probably because the negative interjections contradicted the subjects' interpretations about the request associated with the experimenter's tacit promises.

In the SEV theory of social influence, source characteristics are postulated to bias the target's estimations of the objective probabilities associated with influence messages. Positive attraction for the source should cause the target to exaggerate the probability estimations made of low

credibility promises; negative attraction should cause the target to underestimate the probability of contingent rewards associated with highly credible promises. Sapolsky (1960) provided support for these hypotheses in two studies which manipulated high or low attraction between subjects and the experimenter. In a standard verbal conditioning paradigm, subjects were positively reinforced for the emission of all first person pronouns. Subjects in the high attraction conditions demonstrated considerable "learning" of the correct responses, while subjects in the low attraction condition did not exhibit "learning." However, when the experimenter left the room and subjects continued construction of tape-recorded sentences, subjects in the low attraction conditions quickly evidenced a significant "learning" effect. Levy (1967) employed a female graduate student who possessed physical endowments and manner which left little doubt concerning her ability to elicit beneficience from the typical male undergraduate. In this verbal conditioning experiment, a confederate who was allegedly leaving the experiment preinformed some waiting subjects about the reinforcement contingencies involved in the experiment. Other subjects were not preinformed. Superior performance levels were achieved by subjects who were explicitly told of the contingency involved in the experimenter's saying "Mmm-hmm." If the social reinforcement paradigm is viewed as involving the transmission of tacit promises of social rewards, and if the promises of the high attraction source are perceived as being more credible than the promises of the low attraction source, the results reported above confirm SEV theory.[5]

The SEV theory of social influence postulates that the expertise (esteem) of the source produces the same kind and direction of target biasing of estimated probabilities regarding the subjective expected values associated with promises as does source attraction. The present experiment was designed

to test the effects of experimenter expertise upon the performance of subjects in a verbal reinforcement task. The experimenter was represented as a doctoral candidate collecting his dissertation data or else as an undergraduate fulfilling an assignment for his sophomore level experimental psychology course. In order to heighten the effects of esteem differences on verbal conditioning, the technique utilized by Levy of preinforming subjects of the reward contingency was compared to the more traditional social reinforcement paradigm. Hence, the experiment was a 2 x 2 factorial design which included high and low experimenter expertise and subjects who were either preinformed of the contingency used by the experimenter or were not so preinformed.

The specific hypotheses guiding the study were:

(1) Higher performance levels should be obtained from subjects when the experimenter is more expert (esteemed) and the paradigm is a traditional social reinforcement one involving tacit communications;

(2) Higher performance levels should be obtained by subjects when they are preinformed than when they are not, heightening the effects of both high and low esteem.

Method

Subjects and Experimental Personnel

Forty male subjects partially fulfilled an introductory psychology course requirement by participating in the study. Subjects signed-up for the experiment on a sheet posted on a Bulletin Board (along with the other sign-up sheets) in the Psychology Department. Subjects arrived at the laboratory waiting room one at a time according to the date and time specified on the

sign-up sheet, and were assigned on a random basis to the four cells of the design. Six male undergraduate and two male graduate students served as confederates and experimenters. Preassigned laboratory duty hours determined experimental personnel assignments, with the provision that all personnel serve about equally often in one cell of the design as in another.

Procedures

In the preinformation condition of the experiment a male confederate, posing as another subject, entered the waiting room after the subject arrived, picked up a book and a coat from a chair and, turning to the waiting subject, said:

> "I know what they wanted in that experiment. They have you make up a bunch of sentences, and every time you use 'I' or 'we' in a sentence the experimenter says 'good'. I guess they're trying to get you to use the pronouns 'I' or 'we' more often."

The confederate then left the room immediately. In the tacit (no preinformation) condition, the confederate entered the waiting room, picked up a book, and a coat, and left, saying nothing.

Following this, the experimenter entered the room and introduced himself. In the high expertise condition he was dressed in jacket and tie, and said:

> "Hi. We'll be working together for the next half-hour or so in a verbal facilitation experiment. I'm a Ph.D. candidate and I'm doing this experiment as part of my doctoral dissertation. Will you follow me to another room please?"

In the low expertise condition, the experimenter was dressed casually in jeans and sport shirt, and greeted the subject by saying:

> "Hi. We'll be working together for the next half-hour or so in a verbal facilitation experiment. I'm a student in the experimental psychology course and I have to do this experiment for a semester project. Will you follow me to another room please?"

The remainder of the experiment was identical in procedure for all subjects. The experimenter and subject sat at opposite ends of a small table,

separated by a low, wooden table partition. Stimulus cards, recording sheets, and a tape recorder were located on the experimenter's side of the partition, with a microphone on the subject's side. Stimulus materials were forty 3" x 5" index cards with a different past-tense verb printed on each in ½" letters. Six pronouns (YOU, THEY, I, WE, HE, SHE), typed below the stimulus verb, appeared on each card. Subjects were instructed to respond to the presentation of each stimulus card by verbalizing a sentence using the presented verb and any one of the six pronouns. The experimenter used a sample stimulus card (with the verb "drove" on it) to illustrate the procedure and provided a sample sentence ("He drove very fast"). In addition, he explained that, although the session was being tape-recorded, he would record additional data during the experiment. The experimenter recorded the pronoun selection of the subject for each of the forty trials. After giving instructions, the experimenter switched on the tape recorder and began the experiment by displaying the first stimulus card. Each time the subject constructed a sentence using the personal pronouns I or we in conjunction with the stimulus verb, the experimenter said "good." The inflection of the experimenter's voice and the inter-trial intervals were not controlled; each subject was allowed to construct sentences at his own pace. Tape-recording of the session was intended to heighten the authenticity of the experimental situation; tapes of the sessions were not preserved.

Following the forty trials, subjects were thanked for their cooperation and were asked to not discuss the experiment with their classmates. They were then instructed to report immediately to a Departmental secretary in another part of the Social Science Building in order to receive credit for participation. There, on the pretext of providing information to the

Psychology Department concerning student reactions to the requirement concerning participation in experiments, a secretary asked them to complete an Interpersonal Judgment Scale (IJS: Byrne, 1969), which asked for the subjects' evaluations of the experimenter and from which scores were obtained concerning interpersonal attraction and esteem.[6] The secretary then debriefed and dismissed the subjects.

Results

Response Level

The major dependent variable was the number of reinforced responses emitted by subjects. A 2 x 2 analysis of variance showed that neither experimental factor produced a main effect. However, an interaction ($F=4.32$, $df=1/36$, $p<.05$), illustrated in Figure 1, provided confirmation of Hypothesis (1). When the communication was tacit (i.e., a traditional social reinforcement procedure was used), subjects emitted more socially reinforced responses when the experimenter was expert ($\bar{X}=21.7$) than when the latter was inexpert ($\bar{X}=19.2$). Other comparisons in the interaction disconfirmed Hypothesis (2). Surprisingly, when subjects were preinformed about the contingency relating their own responses to the social reinforcements emitted by the experimenter, more reinforced responses were emitted to the less expert ($\bar{X}=23.1$) than to the more expert experimenter ($\bar{X}=17.3$).

Insert Figure 1 about here

Learning Rate

The number of reinforced responses emitted by subjects over four blocks of ten trials was analyzed in a 4 x 2 x 2 repeated measures analysis of variance. Significant results are summarized in Table 1. A significant

blocks effect indicates that subjects did increase the number of reinforced responses emitted over trials, although the largest increase took place after the second block of trials, at which time asymptotic performance was achieved. A three-way interaction of all factors was also significant. Each of the four curves shown in Figure 2 were compared against each of the others. Two of the six comparisons yielded significant quadratic effects (see Table 1). Over trials, preinformed subjects who interacted with the more esteemed experimenter produced significantly fewer reinforced responses than preinformed subjects who interacted with the less esteemed experimenter. The effect of preinforming subjects or not preinforming them of the contingency was revealed on the blocks analyses only when the experimenter was highly esteemed; preinformation inhibited responding.

Insert Table 1 and Figure 2 about here

Post-interaction Impressions

Analyses of the attraction and esteem scores on the post-test impressions of the experimenter indicated a main effect of preinformation on interpersonal attraction ($F=3.78$, $df=1/33$, $p<.06$) and a main effect of expertise on esteem ($F=4.04$, $df=1/33$, $p=.05$).[7] Uninformed subjects ($\bar{X}=11.78$) liked the experimenter more than did the preinformed subjects ($\bar{X}=10.56$). Subjects rated the more expert experimenter ($\bar{X}=11.67$) as more respected and intelligent (i.e., esteemed) than did subjects who rated the less expert experimenter ($\bar{X}=10.44$), thereby supporting the effectiveness of the esteem manipulation.

Discussion

The major finding of the experiment confirms the rather intricate series of conceptualizations which interpret and subsume verbal reinforcement studies as a special case of the social influence process involving tacit contingent promises. The operationalization of expertise was confirmed by post-test measures which indicated that the more expert and more respected experimenter was more esteemed than was the less expert and less respected experimenter. The reward offered by the experimenter was social approval, and when it was offered by the esteemed experimenter it produced more reinforced responses (i.e., compliance to the source's tacit requests). Although it could be argued that the expert's approval was "worth more" to subjects than was the approval of the nonexpert, the SEV theory of influence from which the study was derived assumes that the effect of expertise (esteem) is to bias the estimation of the probability associated with promises. According to SEV theory, when source esteem is low, target subjects will underestimate the objective probability of promises (i.e., the proportion of times the source rewarded compliance in the past); SEV will be less than EV and the subjects will comply to promises less often than the objective probabilities and values warrant. When source esteem is high target subjects will tend to overestimate the objective probability of promises and thus comply to promises more than the circumstances warrant. In the present study the promise always had a probability of 100%. Consequently, the inexpertness of the source could cause target subjects to underestimate the probability of the promise, but expertness (esteem) could not cause the subjects to overestimate the probability of a promise that was 100%.

It is clear that the effects of esteem on performance were as predicted for the traditional verbal reinforcement paradigm. In a way, this result

makes the verbal reinforcement paradigm seem trivial since it really asks subjects to do as the experimenter requests, if they can ascertain what is wanted. On the other hand, if the social reinforcement paradigm is re-interpreted in terms of tacit promises, subtle and important evidence can be gathered both about the ways in which tacit communications can be clearly conveyed and about the effects of source and target characteristics upon the comprehension of and compliance to such tacit communications.

The trends shown in Figure 2 indicate that the major differences in behavior of subjects occurs within the second block of ten trials. It can be assumed that these data indicate that at least those subjects who perform the correct response frequently discover the "correct" hypothesis within the second block of trials and that compliance is asymptotic thereafter.

The more esteemed experimenter elicited fewer reinforced responses from preinformed subjects than did the less esteemed experimenter. The reasons for this unexpected finding are probably complex; only ad hoc alternatives can be explored here. However, the results may indicate why it is that equal and opposite results are obtained in different laboratories concerning the same basic phenomena. Bandura (1962) has contended that the typical verbal conditioning paradigm would lead the subject to emit more verbal operants if the experimenter would just tell him what he wanted. Both Levy (1967) and Page (1970) apparently confirmed Bandura's hypothesis. Yet, depending upon the characteristics of the experimenter, these results can be reversed so that an explicit awareness of the requests of the experimenter can lead to fewer responses. In the present study, when subjects were preinformed by another "subject" about the nature of the experimental task, subjects "suppressed" their responses to the tacit requests of the more esteemed source but increased compliance to the tacit requests of a less

esteemed source. The results for the preinformed subjects thus verify Bandura's prediction only when the experimenter is of low esteem--a curious confirmation, at best.

The Levy and Page studies can be shown to be consistent with the present findings. Levy's experimenter was a stunning female. Although she was a graduate student, cultural stereotypes indicate that "looks" and "brains" do not go together and that young and physically attractive adult females do not concern themselves excessively with intellectual pursuits. The point is that it would not be unreasonable to assume that subjects perceived the experimenter as attractive but not expert. Thus, subjects in the preinformed condition emitted more compliant responses than did subjects in the non-preinformed condition.

Page (1970) used "sophisticated" personality and social psychology students in one group and naive sophomore introductory psychology students in another. If it can be assumed that most advanced psychology students know what a verbal reinforcement paradigm is, then in a very real sense they could be said to be preinformed about the experimenter's requests. The experimenters were two female undergraduate students, who, it may be assumed, were regarded as low in expertise. As might be expected, given the above pattern of results, subjects in the "preinformed" condition emitted more reinforced responses than subjects in the "non-preinformed" condition.

The question of interest is why expertise and preinformation should interact as they apparently do in social reinforcement studies. Perhaps compliance is interpreted differently when the subject knows what the experimenter wants but the latter does not know that the subject knows. If the experimenter seems to be taking pains to avoid telling the subject

what is wanted, then discovery of what is wanted is the problem task and to have prior information is illegitimate. An anology would be to a person who is handed answers to examination items by a stranger just before entering the classroom to take a test. Presumably, subjects who are illegitimately aware of the contingency suppress responses in the high esteem condition because responding constitutes "cheating" or violation of salient norms. However, the cheating norm hypothesis seems to be a weak interpretation because the norm is the same whatever the expertise of the source unless the latter's characteristics serve to elicit and make relevant salient norms.

Response suppression may occur in the high esteem condition because the preinformed subjects attempted to play the role of a "good" subject: "If I didn't know the contingency, how would I respond?" Such role playing, if it occurred in this case, was quite inaccurate! This implicit psychological theory hypothesis could be evaluated by extending the number of trials quite drastically. Page used 100 acquisition trials with no confirmation for the role-taking hypothesis.

A combination of the role-taking and norm-elicitation hypotheses can be related to reinforcement theory. Rosenberg (1965) has suggested that subjects have an "anxiety-toned concern that they win positive evaluation from the experimenter (p. 29)." Riecken (1962) also postulated that subjects are typically actively engaged in determining the intent of the experimenter in order to increase the probability of receiving rewards and positive evaluation (and avoiding negative evaluation) from the experimenter. Minor (1970) found that subjects who were not concerned with evaluation did not avail themselves of such cues. Page (in press) found that subjects for whom

evaluation apprehension was aroused produced a low rate of reinforced responses in a verbal conditioning study. The present experiment would suggest that evaluation apprehension would be more or less, depending upon the characteristics of the experimenter. Presumably, the more evaluation apprehension aroused, the more salient norms regarding cheating would be to the subject and the more concerned he would be that he behave just like any other "normal" subject. Thus, behaviors will be inhibited or uninhibited by illegitimate information, depending upon the implicit psychological theory of the subject and the characteristics of the source. If the source has high status, possesses expertise, or has high prestige it might be expected that compliance to the tacit influence attempts of the source will be dampened by prior information possessed by the target about what the source wants. This type of reactance (Brehm, 1966) is specific to the situation and the type of source involved. The interpretation is weakly supported by the fact that preinformed subjects liked the experimenter less than did subjects who were not provided with illegitimate information.

Whatever the merits of the post-hoc and speculative interpretations made here concerning the complex and unexpected findings regarding the effects of preinforming subjects about the nature of the experiment, the findings clearly place the verbal reinforcement paradigm into social psychology and away from traditional individual psychology interpretations of the data. As a paradigm for the study of tacit influence attempts, the study of verbal reinforcement is rich with social psychological implications.

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Footnotes

1. The present investigation was supported by Grant Number OEG-2-71-0073 from the Department of Health, Education, and Welfare to James T. Tedeschi.
2. The authors wish to thank Thomas Bonoma, Derek Carpenter, David Levine, Kevin MacCollum, Anthony McNamara, Frank Monteverde, Bill Peterson, Barry Schlenker, Bob Smith III, and Terry Stapleton for their help during various phases of this study.
3. The word "mendation," coined by James T. Tedeschi, was drawn from "recommendations." It refers to a prediction of a positive outcome of specified target behavior based upon contingencies not controlled by the source of the mendation.
4. A large part of the verbal conditioning literature of the past decade is addressed to the "awareness" issue. This issue, which neatly illustrates the differing epistemological biases of the so-called cognitive theorists and the so-called radical behaviorists, was entertainingly reviewed during a recent debate between two protagonists, Leonard Krasner (awareness has not been shown to be an essential factor in verbal conditioning) and Charles Spielberger (awareness has been shown to be the mediating factor in verbal conditioning response rates), during the proceedings of the First Annual Symposium on Behavior Theory at the Louisiana State University Medical College, New Orleans, La., April 1-3, 1970.

5. A subjective expected utility (SEU) model provides an alternate interpretation of the results. The SEU model predicts outcomes as a product of the individual's estimates of the probability of obtaining a value and the worth (utility) of the goal to the individual (Edwards, 1954). Utilities, not objective values, control decisions. If reinforcers mediated by a highly attractive source are perceived as having greater utility (more worth) for the target than those mediated by a less attractive source, an SEU interpretation of the results is reasonable.
6. Items from the IJS concerning personal feelings for and willingness to work with the rated person were added together to obtain a score for attraction (Byrne, 1969). Items concerning intelligence and respect were added together to obtain a score for esteem. The esteem measure is more fully described and validated in a study by Tedeschi (1971).
7. Three subjects failed to report to the secretary.

TABLE 1

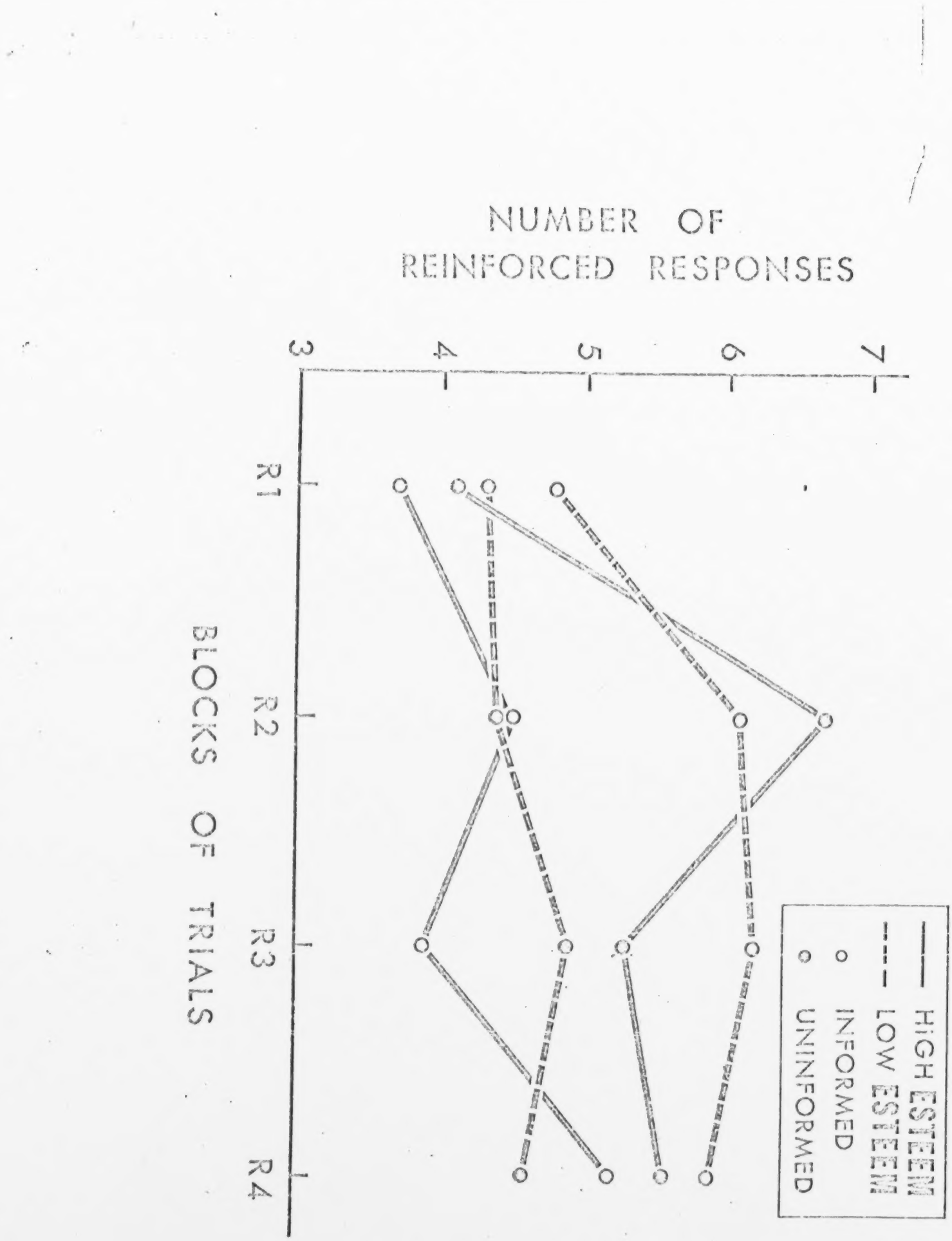
Summary of significant results of repeated measures analysis of variance of critical responses for 2 levels of esteem and 2 levels of preinformation over 4 blocks of ten trials (df=1/18).

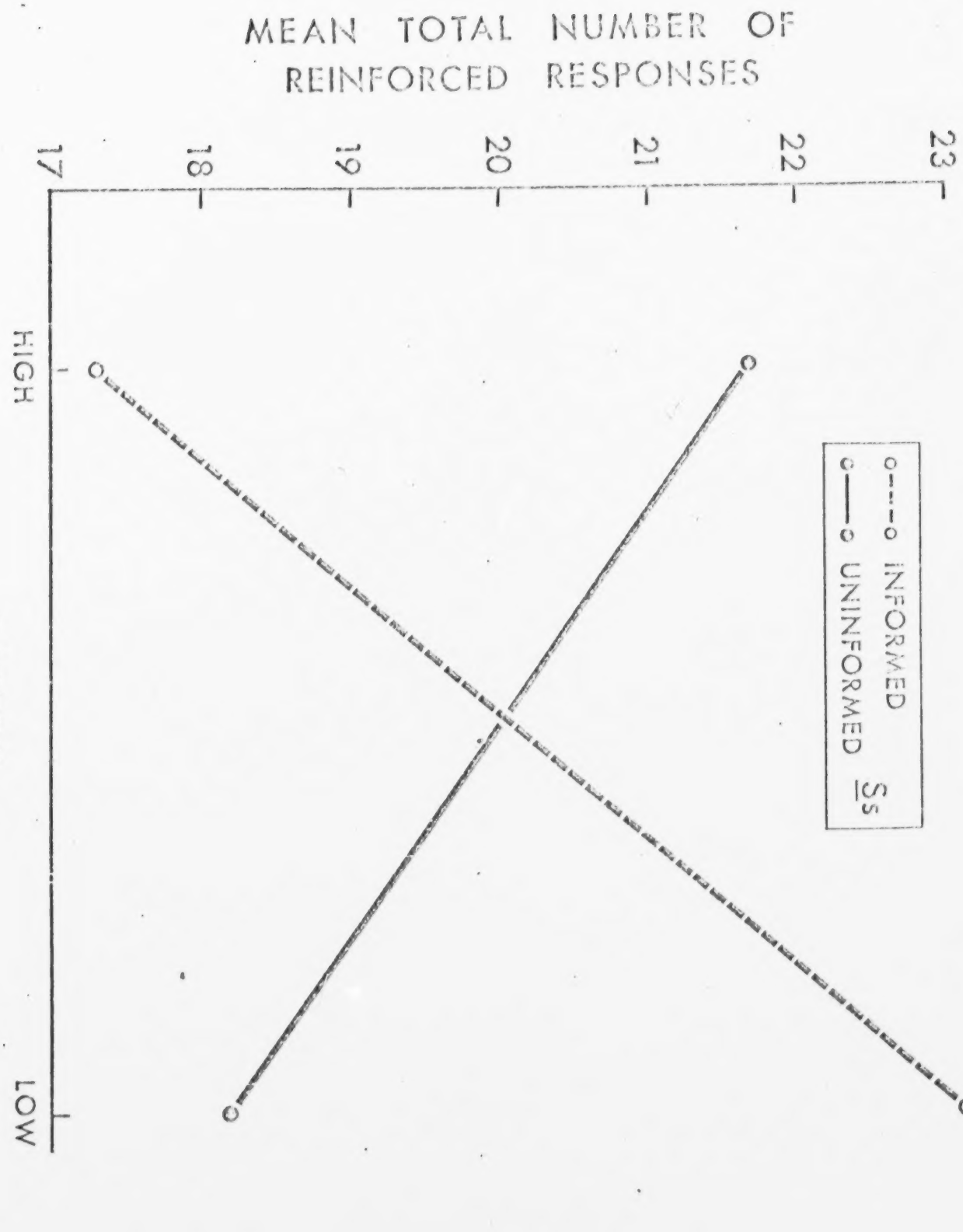
Type of Comparison	Trend test	
	Linear	Quadratic
Total reinforced responses: All conditions	F=5.44 $p < .03$	F=6.86 $p < .01$
Three-way interaction:		
Blocks, esteem, and preinformation variables	NS	F=7.60 $p < .01$
Test of esteem:		
Blocks, preinformation, high esteem vs. Blocks, preinformation, low esteem	NS	F=5.03 $p < .04$
Test of preinformation:		
Blocks, high esteem, preinformed vs. Blocks, high esteem, non-preinformed	NS	F=8.34 $p < .01$

Figure Captions

Figure 1. Mean frequencies of I-we sentences for preinformed and non-preinformed conditions as a function of high- and low-esteem of the experimenter.

Figure 2. Mean frequencies of I-we sentences for each experimental condition in four blocks of 10 trials each.


NUMBER OF
REINFORCED RESPONSES
3
4
5
6
7
R1
R2
R3
R4
BLOCKS OF TRIALS
HIGH ESTEEM
LOW ESTEEM
INFORMED
UNINFORMED


MEAN TOTAL NUMBER OF
REINFORCED RESPONSES
17
18
19
20
21
22
23
HIGH
LOW
ESTEEM
INFORMED
UNINFORMED
Ss